

ABSTRACT OF THE DISCLOSURE

Disclosed is a method for fabricating high-purity silica glass using a sol-gel processing that includes the steps of: (a) mixing a deionized water with a fluorine
5 compound and a dispersion agent to prepare an aqueous premix solution; (b) mixing the aqueous premix solution with a fumed silica; (c) mixing the resulting mixture to form a dispersed sol; (d) aging the sol at the ambient temperature to stabilize silica particles; and, (e) removing air voids from the sol and adding a gelation agent.